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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,896	06/07/2005	Philip L. Eardley	36-1905	8426
23117 7590 05/04/2009 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
EXAMINER				
CHANG, TOM Y				
ART UNIT		PAPER NUMBER		
2456				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/537,896

**Applicant(s)**

EARDLEY, PHILIP L

**Examiner**

TOM Y. CHANG

**Art Unit**

2456

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This office action is in response to correspondence received on 04/01/2009.  
Claims 10 and 11 have been amended and claims 1-9 remain as previously presented.  
Claims 1-11 are pending.

#### ***Specification***

The disclosure is objected to because of the following informalities. The applicant recites a computer readable medium in claim 11, however there is not description of what is meant by computer readable medium in the specification. As such this opens the interpretation of computer readable medium to include transmission signals which is non statutory. Appropriate correction is required.

#### ***Title***

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

#### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 11 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 11 is directed to "a computer readable medium." Applicant does not further define this in the specification which leads the

examiner to construe the medium to include signals. A transitory, propagating signal, as those sent over optical or electronic communications links, is not "process, machine, manufacture, or composition of matter." Those four categories define the explicit scope and reach of subject matter patentable under 35 U.S.C. §101; thus, such a signal cannot be patentable subject matter. See *In re Nuijten*, 500 F.3d 1346, 84 USPQ2d 1495 (2007).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3 and 5-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Karino et al. (U.S. Patent No. 7,327,671).

With respect to claim 1 and 11, Karino teaches a method of routing packets in a packet network, said packet network including a chain of packet nodes, said chain comprising first and second access nodes for communicating with one or more mobile nodes (Fig. 17 BS2 and BS3), and one or more intermediate packet nodes, said one or more intermediate packet nodes providing a path interconnecting said first and second access nodes, (Fig. 17 R4, R2 and R5), said method comprising the steps of: installing, in said intermediate packet nodes, first routing data defining a first routing path in one

direction along said chain to a mobile node via said first access node (Fig. 17 routing path R2->R4->BS2; Col. 32 line 23-29 original communication route), and second routing data defining a second routing path in the opposite direction along said chain to said mobile node via said second access node; (Fig. 17 routing path R2->R5->BS3; Col. 32 line 23-29 alternate communication route), operating each of said intermediate packet nodes to: determine, on receipt of a packet destined for said mobile node, whether said packet is from another node on said chain or not; (determine branch point, col. 33 lines 22-28; if the node is the branch point then it received a packet not on the chain, a router can be in unicast or bicast mode unicast indicates that the mobile host is in a chain and bcasts indicates not in chain Col 33 lines 43 ), and a) if the packet is determined to be from a node not on said chain, copying the packet and routing said copy along one of said routing paths and routing said packet along the other of said routing paths; (Fig. 17 (2) sends packet one direction and (5) copy in the other direction), and b) if the packet is determined to be from another node on said chain, route said packet along said chain only in the direction in which it is currently travelling. (Fig. 17 (3) sends packet in currently traveling direction).

With respect to claim 2, Karino teaches wherein said packet (s) include (s) a unique address of the mobile node. (col. 2 line 1 packet addressed to mobile node (MH)).

With respect to claim 3, Karino teaches wherein said unique address is the same before and after a handover of the mobile node from the first access node to the second

access node. (col. 33 lines 10-12, The bicast router adds the received packet addressed to the mobile host MH but does not change the MH address in the packet).

With respect to claim 5, Karino teaches wherein said first routing data are installed prior to the handover of said mobile node from said first access node to said second access node. (Fig. 17 routing path R2->R4->BS2; Col. 32 line 23-29 original communication route installed before alternate communication route R2->R5->BS3).

With respect to claim 6, Karino teaches wherein said second routing data include data indicating that said second routing data relates to the handover of said mobile node from said first access node to said second access node. (col. 33 lines 22-28, branch point receiving message defines alternate communication route and is indicative of a handoff between originally communication route and alternate communication route).

With respect to claim 7, Karino teaches wherein said second routing data are installed in response to a routing control message generated at said second access node and transmitted to said first access node. (Col. 30 line 60-col. 31 line 45, adjacent communication establishing message from BS3 to BS2).

With respect to claim 8, Karino teaches wherein said first access node and said second access node are wireless access nodes and wherein said packets are sent to and received from said mobile node via a wireless transmission system. (Fig. 17 wireless base stations BS2 and BS3 communicating to mobile node MH via wireless transmission, shown as (4) and (7)).

With respect to claim 9, Karino teaches a packet network including a chain of packet nodes, said chain comprising: first and second access nodes for communicating with one or more mobile nodes; (Fig. 17 BS2 and BS3), and one or more intermediate packet nodes providing a path interconnecting said first and second access nodes ; (Fig. 17 R4, R2 and R5), said intermediate packet nodes having installed therein first routing data defining a first routing path in one direction along said chain to a mobile node via said first access node (Fig. 17 routing path R2->R4->BS2; Col. 32 line 23-29 original communication route), and second routing data defining a second routing path in the other direction along said chain to said mobile node via said second access node (Fig. 17 routing path R2->R5->BS3; Col. 32 line 23-29 alternate communication route), each intermediate packet node being arranged in operation to determine, on receiving a packet destined for said mobile node, whether said packet is from another node on said chain or not (determine branch path, col. 33 lines 22-28; if the node is the branch point then it received a packet not on the chain), and a) if the packet is determined to be from a node not on said chain, copying the packet and routing said copy along one of said routing paths and routing said packet along the other of said routing paths; (Fig. 17 (2) sends packet one direction and (5) copy in the other direction), and b) if the packet is determined to be from another node on said chain, route said packet along said chain only in the direction in which it is currently traveling. (Fig. 17 (3) sends packet in currently traveling direction).

With respect to claim 10, Karino teaches packet node for use in a packet network according to claim 10 (*sic.* [9]). (Fig. 17 R4, R2 and R5),

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Karino as applied to claim 3 above, and further in view of O'Neill.

With respect to claim 4, Karino teaches all the elements as applied to claim 3 above except for the operating steps 4a, 4b and 4c. However, O'Neill operating each node in the packet network: a) to associate a routing value with said unique address; (Fig. 26 own height), b) responsive to the receipt of said packet at said node to forward said packet towards another node having a lower routing value associated with said unique address; (Page 13 lines 18-19, packet is directed from higher node to lower node), c) responsive to the creation of a wireless link between a mobile node having said unique address and said node to reduce said routing value associated with said unique address to a lower value than that associated with said unique address by the other nodes in said network (Page 18 lines 15-16, when a mobile node changes BS affiliate it decreases its height value relative to the other nodes). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains to modify the handoff method and system of Karino



with the node level information tracking of O'Neill in order to more effectively operate a wireless system during handoffs.

### ***Applicant's Arguments***

The applicant argues that the amendments to the claims have overcome the § 101. The examiner disagrees, merely changing the claims to recite computer readable medium does not prevent the reasonable interpretation of the medium to include transmission media. The applicant is advised provide a description of computer readable medium in the specification that clearly defines the bound as to which the medium comprises.

The applicant further argues that the prior art of record does not provide the same solution as the applicant's invention. The examiner respectfully disagrees. Karino describes various embodiments which include the fourth embodiment that teaches sending a message (branch point retrieving message) to a router to which indicates that the position of the mobile host in the vicinity of two base stations. This tell the router to bicast data to the original route and the previously unlinked route so that the data can be received through either base stations to the same host (case a). When the mobile station sends a bicast release message this tells the router to return to unicast mode (case b).

The applicant also argues the prior art does not teach determination of whether said packet is from another node on the said chain or not. The branch point retrieving

message is used by the router to decide whether the data packet is received from and should be further forwarded to the currently established routing path, or the packet is not on a specific chain and must be routed via two paths. The clearly shows the equivalent functionality of the determination as recited in the claim.

The applicant argues that the dependent claims are allowable based upon their dependence of the independent claims and the arguments against the rejections for the independent claims. The examiner finds this argument not persuasive for the same reasons above in the discussion of the independent claim arguments.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TOM Y. CHANG whose telephone number is (571)270-5938. The examiner can normally be reached on Monday - Thursday from 9am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit, can be reached on (571) 272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/T. Y. C./  
Examiner, Art Unit 2456  
04/30/2009

/Kevin Bates/  
Primary Examiner, Art Unit 2456